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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,101	01/28/2004	Shigeru Hosoe	02860.0767	9703
22852 7590 07/19/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER LAZORCIK, JASON L	
			ART UNIT 1731	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,101	<b>Applicant(s)</b> HOSOE, SHIGERU	
	<b>Examiner</b> Jason L. Lazorcik	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Double Patenting***

Claim 1, 3-5, and 15-17 are directed to the same invention as that of claims 1-13 and 24-34 of commonly assigned United States Patent 7,222,710. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

### ***Claim Rejections - 35 USC § 102***

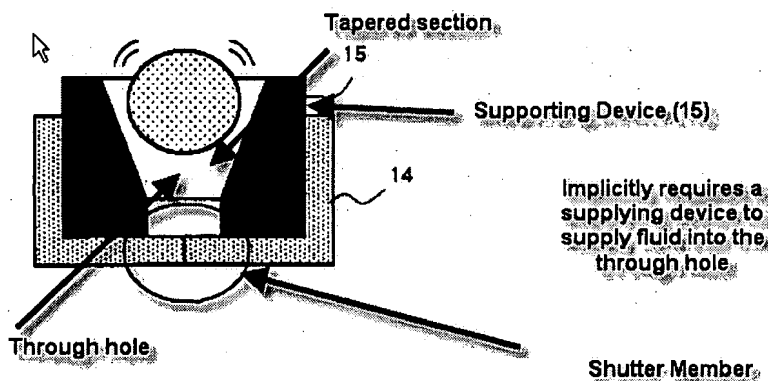
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 15, 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fujimoto (US 6,370,915).

With reference to the following annotated excerpt image 20, Fujimoto teaches an apparatus for conveying a portion of heated glass material. Said device comprises a

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supporting device of porous carbon having a tapered through hole and a shutter member movable between an open and a closed position.



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

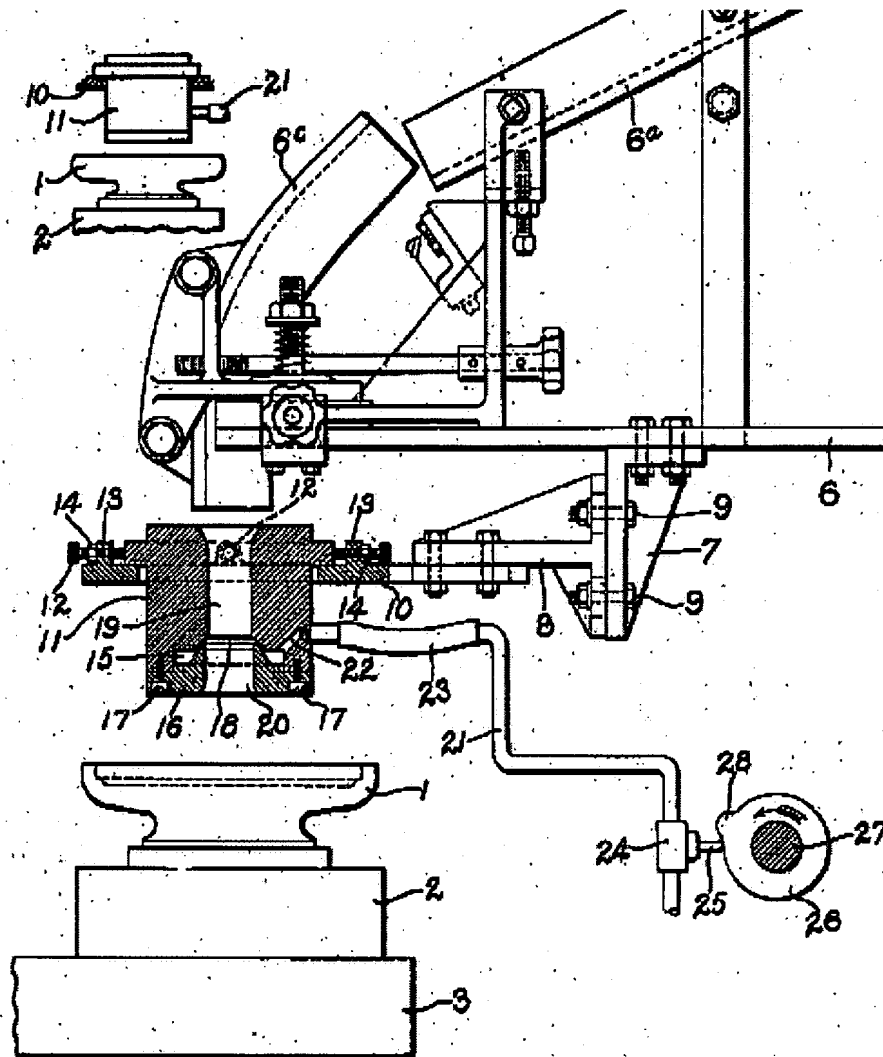
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter (US 1,755,397) in view of Fujimoto (US 6,370,915) .

Claims 1,

**1,3,4, 5, and 15** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hunter (US 1,755,397). Regarding **Claim 1** and with particular reference to the excerpt figure 1 from the instant reference, Hunter is understood to disclose a supporting device (11) having a through hole (19) passing in a gravity direction for the support of a glass material in a fluid or semi-fluid condition. The reference teaches that a charge is dropped vertically downward into the through hole (pg 2, Lines 20-44), Retarding or stopping the fall of the glass in a non contact fashion (Pg 1, Line 71 to Pg 2, line 9), and dropping the glass material from the lower end of the through hole into a mold "suitable for the manufacture of flat glass...by a pressing process" (Pg 2, Lines 9-19). As is clearly depicted in the following image, the supporting device is characterized by a "tapered section which increases in diameter from its base to its top" in the upper or top section of the through hole (**Claim 15**)



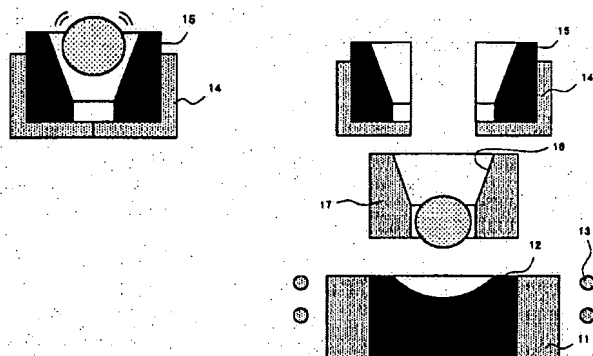
The reference continues by teaching the use of "hot air... which serves not only to retard the passage of the charge through the guiding member (11) but also to minimize the loss of heat therefrom to the surrounding atmosphere". Hunter's reference to the supply of hot air is understood to provide for at least some measure of temperature control over the fluid delivered from the supplying device and therefore implicitly requires a means or device to control the temperature of the supplied air (**Claim 3**). The reference further teaches that the device provides "an enveloping film of gas surrounding the charge as it falls, which tends to prevent the charge contacting with

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the side walls of the guiding member" (Pg 2, line 97 to Pg 3, Line 5) (**Claim 5**). Further, the prior art teaches that the glass charge is delivered to a "pressing process" or to "a molding die of a molding device" explicitly for the production of an automobile headlight lens or "an optical glass". With respect to **claim 16**, the instant reference teaches the use of an annular nozzle or equivalently a series of upwardly directed ports communicating between the annular groove and the through hole (page 2, Lines 83-89).

Although the Hunter apparatus fails to specifically provide for a shutter member as set forth in the instant claim, the inclusion of said shutter in the instant apparatus would have been obvious to one of ordinary skill in the art at the time of the invention when viewed in light of the disclosure set forth by Fujimoto (US 6,370,915).

In an apparatus recognized as closely analogous to both the Applicants claimed apparatus and that set forth by Hunter, Fujimoto teaches an device for guiding and supplying a glass material to a molding surface (See excerpt figure 20 below). Specifically, both Fujimoto and Hunter are intimately concerned with positioning and controlling the rate of decent of a heated portion of glass material into a molding apparatus.



The Fujimoto apparatus teaches a supporting device (15) having a through hole in a gravity direction which is implicitly connected to a supply device to supply fluid into the region of the through hole. The device specifically comprises a support arm (14) having a “movable shutter” located lower in the vertical direction than a position through which the fluid is supplied into the through hole. As clearly depicted in the above excerpt image 20, the shutter member is movable between a position which at least partially closes the through hole (Left image) and a position for opening the through hole (Top right image).

In view of the Fujimoto teachings, the addition of a movable shutter at the lower end of the through hole in the Hunter apparatus would have been an obvious addition for one of ordinary skill seeking to provide enhanced control over discharge of the heated glass material and/or in order to avoid inadvertent discharge of the molten gob. One of ordinary skill in the art would further recognize many variants and structurally functional equivalents to the shutter member encompassed by the Fujimoto disclosure. For at least this reason, the instant claim wherein a shutter member for closing at least a portion of the through hole is located lower than a position through which the fluid is supplied into the through hole is held *prima facie* obvious over the prior art apparatus as disclosed by Hunter in view of the Fujimoto apparatus.

With respect to **claim 4**, Hunter teaches the use of “hot air or other gas” as a means to support the glass gob as well a means to “minimize the loss of heat (from the glass gob) to the surrounding atmosphere” (Pg 2, lines 121-126). The instant reference



is silent regarding the inclusion of a “heater and a thermal sensor which are arranged in a supplying path of the fluid”. Absent any unexpected results to the contrary, one having no more than an ordinary level of skill in the art at the time of the invention who was aware of the Hunter disclosure would have been able to arrive at the claimed device structure. Specifically, combining a heating element in communication with the supply fluid (e.g. in a supply path of the fluid) and a temperature sensor as part of a controlling means for said heating element would have been an obvious choice for anyone of ordinary skill seeking to control or optimize the supplied “hot air” in the process as disclosed by Hunter.

**Claims 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter and Fujimoto as applied to claim 1 above, and further in view of Hirota (US 5,762,673).

With respect to the above disclosed apparatus, Hunter teaches that “While I have shown an annular nozzle for directing the charge retarding fluid upwardly, I contemplate any and all equivalents of this construction, such for example as a series of upwardly directed ports communicating between the central aperture and the annular chamber (15)” (Pg 2, Lines 83-89). Hunter is silent regarding the specific limitation wherein a porous material is arranged along the inner annular surface of the through hole (Claim 16) or that said porous material should be formed from graphite (Claim 17). Fujimoto teaches a porous glassy carbon based supporting surface (15) but does not explicitly teach graphite as a preferred embodiment.

In a closely related piece of art, Hirota teaches a method and apparatus whereby a hot gob of glass is suspended by an air blast or a "gaseous stream" prior to molding. Hirota teaches that "If the gaseous stream is locally irregularly concentrated at the lower central part of the glass gob, the glass gob will be undesirably deformed...In order to avoid the occurrence of such deformation, the gaseous stream may be spouted through a plurality of orifices to suppress the local concentration of the gaseous stream". In another passage (Column 7, lines 31-39), Hirota teaches that the materials of construction for the floating apparatus, while not specifically limited, should exhibit sufficient heat resistance should the glass gob contact the device during the floating process. Further, the instant reference specifically advocates the use of carbon as a preferred heat resistant material.

In view of the Hirota disclosure, it would have been obvious for one of ordinary skill in the art at the time of the invention to utilize a porous barrier constructed of a carbon based material in the Hunter apparatus. The use of a porous material would have been an obvious approach to providing the "plurality of orifices" in order to suppress the local concentration of the gaseous stream in the manner taught by Hirota. Further, it would have been obvious in accord with Hirota's teachings to construct the barrier of a porous carbon or a graphite material in order to provide a sufficient heat resistance for the material. The Hirota modifications would have been obvious to one seeking to minimize glass gob deformation while providing sufficient heat resistance in a device according to the Hunter disclosure.

### ***Response to Arguments***

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Applicant's arguments with respect to claims 1-3, 5, 7, 11, 12, and 15 under 35 U.S.C. §102(b) have been considered but are moot in view of the new ground(s) of rejection.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL

  
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